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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kang Soo Seo

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EXAMINER

CHIO, TAT CHI

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2621

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/642,635	Applicant(s) SEO ET AL.	
	Examiner TAT CHIO	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7-10 and 14-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-10 and 14-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/20/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/20/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 2, 4, 5, 7-10, and 14-33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 7-10, 14, 15, 17, 18, 20-24, 26, and 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawabe et al. (6,031,962) in view of Kikuchi et al. (5,870,523), Yamane et al. (5,784,528), and Kato et al. (US 7,477,833 B2).

Art Unit: 2621

3. **Consider claims 1, 14, and 17**, Sawabe et al. teach a computer readable medium storing an executable data structure for managing reproduction of at least video data having multiple reproduction paths recorded on the computer readable medium by a reproduction device, comprising: a data area for storing stream files, the stream files including at least a portion of the video data having multiple reproduction paths (Fig. 5), the video data having multiple reproduction paths being divided into one or more interleaving units (Fig. 6), each interleaving unit associated with one of the reproduction paths (Fig. 6), the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 7), but do not explicitly teach and the video data in each interleaving unit being divided into entry points, a playlist area for storing playlist files, the playlist file including at least one playitem, the playitem identifying a playing interval in a clip of the video data; and a clip information area for storing clip information files, the clip information files for managing reproduction of the video data having multiple reproduction paths by the reproduction device, the clip information file including an entry point map associated with a corresponding reproduction path of the multiple reproduction paths, each entry point map associated with a corresponding stream file and identifying the entry points in the video data for the associated reproduction path, the stream file, the clip information file, and the playlist file being logically separate.

Kikuchi teaches a playlist area for storing playlist files (Fig. 17), the playlist file including at least one playitem, the playitem identifying a playing interval in a clip of the video data (PGC playback time of Fig. 18); and a clip information area for storing clip information files (Fig. 25 and Fig. 26 store clip information files), the clip information files

Art Unit: 2621

for managing reproduction of the video data having multiple reproduction paths by the reproduction device (Fig. 25 is the NAV pack of the VOB), the clip information file including an entry point map associated with a corresponding reproduction path of the multiple reproduction paths (Fig. 29, Fig. 30, and col. 27, lines 5-44), each entry point map associated with a corresponding stream file (Fig. 30 and Fig. 34) and identifying the entry points in the video data for the associated reproduction path, the stream file, the clip information file, and the playlist file being logically separate (Fig. 6, Fig. 25, and Fig. 26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to separate the data area and the management area to efficiently organize the data in the recording medium.

However, Sawabe and Kikuchi do not explicitly teach the video data in each interleaving unit being divided into one or more entry points, the playlist indicating at least one clip information file for an associated reproduction path used by the corresponding playlist item, the entry point map mapping a presentation time stamp to an address for a corresponding entry point of the video data, and the playlist file including different file extensions from one another.

Yamane and Kato teach the video data in each interleaving unit being divided into entry points (col. 43, lines 27-36 of Yamane and col. 12, lines 21-29 of Kato). Yamane teaches that each interleaved unit consists of video object unit (VOB), each of which comprises one or more MPEG GOP that contains at least one I-picture, and as indicated by Kato, I-picture is an entry point. Therefore, Yamane teaches that an interleaved unit contains entry points). Therefore, it would have been obvious to one of

Art Unit: 2621

ordinary skill in the art at the time the invention was made to divide an interleaved unit with entry points to provide a greater navigating freedom to the viewers.

Kato further teaches that the playitem indicating at least one clip information file for an associated reproduction path used by the corresponding playitem (Fig. 124), the entry point map mapping a presentation time stamp to an address for a corresponding entry point of the video data (Fig. 124), and the playlist file including different file extensions from one another (Fig. 14).

Consider claims 2, 28, and 29, Sawabe et al. teach the computer readable medium, wherein the video data having multiple reproduction paths is divided into a plurality of clip files (Fig. 6), each clip file including video data associated with one of the multiple reproduction paths (Fig. 6), and each clip file divided into one or more of the interleaving units (Fig. 6).

Consider claims 4, 24, and 26, Sawabe et al. teach the computer readable medium, wherein each interleaving unit in at least one clip file includes a same number of entry points (Fig. 7).

Consider claim 7, Sawabe et al. teach the computer readable medium, wherein each entry point map indicates which of the identified entry points is a last entry point in an interleaving unit (Fig. 6 and Fig. 7).

Consider claim 8, Sawabe et al. teach the computer readable medium, wherein each entry point map indicates which of the identified entry points is a first entry point in an interleaving unit (Fig. 6 and Fig. 7).

Consider claim 9, Sawabe et al. teach the computer readable medium, wherein the entry point maps are aligned in time (Fig. 6 and Fig. 7).

Consider claims 10 and 33, Sawabe et al. teach the computer readable medium, wherein at least one interleaving unit starting and ending with a reproduction path change point (Fig. 6).

Consider claims 20, 21, 22 and 23, Sawabe et al., Kikuchi et al., and Yamane and Kato teach a method of recording a data structure for managing reproduction of at least video data having multiple reproduction paths on a recording medium, comprising: recording playlist files in a playlist area of the recording medium, the playlist file including at least one playitem, the playitem identifying a playing interval in a clip of the video data (PGC playback time of Fig. 18 of Kikuchi), the playitem indicating the at least one clip information file for an associated reproduction path used by the corresponding playitem (Fig. 124 of Kato); recording the clip information files in a clip information area of the recording medium, the clip information files for managing reproduction of the video data having multiple reproduction paths (Fig. 25 is the NAV pack of the VOB of Kikuchi), the clip information file including an entry point map associated with corresponding one reproduction path of the multiple reproduction paths (Fig. 29, Fig. 30, and col. 27, lines 5-44 of Kikuchi), the entry point map mapping a presentation time stamp to an address for a corresponding entry point of the video data (Fig. 124 of Kato), each entry point map associated with a corresponding stream file (Fig. 30 and Fig. 34 of Kikuchi) and identifying the entry points in the video data for the associated reproduction path, the stream file, the clip information file (Fig. 6, Fig. 25, and Fig. 26 of

Art Unit: 2621

Kikuchi), and the playlist file including different file extensions from one another (Fig. 14 of Kato); and recording stream files in a data area of the recording medium, the stream files including at least a portion of the video data having multiple reproduction paths (Fig. 6 of Sawabe), the video data having multiple reproduction paths being divided into one or more interleaving units (Fig. 7 of Sawabe), each interleaving unit associated with one of the reproduction paths (Fig. 6 of Sawabe), and the interleaving units associated with different reproduction paths being interleaved in the data area (Fig. 6 of Sawabe), and the video data in each interleaving unit being divided into entry points (col. 43, lines 27-36 of Yamane and col. 12, lines 21-29 of Kato).

Consider claim 15, Sawabe et al. teach the computer readable medium, wherein each interleaving unit in at least one clip file includes a same number of entry points (Fig. 7).

Consider claim 18, Sawabe et al. teach the computer readable medium, wherein the number of entry points is fixed for at least interleaving units associated with a same reproduction path (Fig. 7).

Consider claim 30, Sawabe et al. teach the apparatus further comprising: an encoder configured to encode the video data having multiple reproduction paths (72 of Fig. 11).

Consider claim 31, Kato further teaches the apparatus further comprising: a source packetizer configured to packetize the video data (Fig. 91).

Consider claim 32, Kato further teaches the apparatus further comprising: a source de-packetizer configured to de-packetize a packet of the video data (Fig. 92).

4. Claims 5, 16, 19, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawabe et al. (6,031,962) in view of Kikuchi et al. (5,870,523) and Yamane et al. (5,784,528), and Kato et al. (US 7,477,833 B2) as applied to claims 1, 14, 17, 22, and 23 above, and further in view of Sugimoto et al. (US 6, 470,140 B1).

Consider claims 5, 25, and 27, Sawabe et al., Kikuchi et al., and Tsumagari teach all the limitations in claims 1 and 3 but fails to explicitly teach the computer readable medium, wherein at least two interleaving units in at least one clip file have a different number of entry points.

Sugimoto et al. teach the recording medium, wherein at least two interleaved units in at least one clip file have a different number of entry points (Fig. 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate different number of entry points to efficiently utilize the random access capability of disc media.

Consider claim 16, Sugimoto et al. teach the computer readable medium, wherein at least two interleaving units in at least one clip file have a different number of entry points (Fig. 44).

Consider claim 19, Sugimoto et al. teach the computer readable medium, wherein the number of entry points varies for at least interleaving units associated with a same reproduction path (Fig. 44).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAT CHIO whose telephone number is (571)272-9563. The examiner can normally be reached on Monday - Thursday 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Q. Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. C. C./
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621